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U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

ATTACHMENT 13

PENNZOIL COMPANY
EASTERN DIVISION - BRADFORD DISTRICT
INVENTORY OF INJECTION WELLS
FOR
KANE SAND UNIT NO. 1

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Appendix A

Contains for each completion type:

1. Well Completion Schematic
2. Plug and Abandonment Procedure
3. Plug and Abandonment Schematic
4. Estimated Plug and Abandonment Cost

Table I

Contains, for each completion type, the following information:

1. Completion Type
2. Operating Status
3. Completion Date
4. Date of Last Mechanical Integrity Test
5. Formation Depth
6. Total Well Depth
7. Casing Program
8. Tubing Program
9. Flood Packer Information

SUPPLEMENTARY INFORMATION

Project Name: Kane Sand Unit No. 1
Associated Leases: Lamont, Wood & Young, Wood, Young & Davis, Gilbert

Project Location: To well No. 4
4,270 feet South of Latitude 41° 32' 00"
1,200 feet West of Longitude 78° 55' 00"
(Bradford Quadrangle, 15' USGS Topographic)

Field Name: Kane Field

Nature of Injection Fluid:

Specific Gravity: 1.003

Suspended Solids: .12 ppm

Total Solids: 1,578 ppm

pH : 7.7

Wellhead Injection Pressure Data:

Average Pressure: 1,000 psig

Maximum Pressure: 1,000 psig

Plug and Abandonment Cost Summary:

<u>Completion Type</u>	<u>No. of Wells</u>	<u>Cost/Well (\$)</u>	<u>Total Cost (\$)</u>
II	64	3,000.00	192,000.00

APPENDIX A

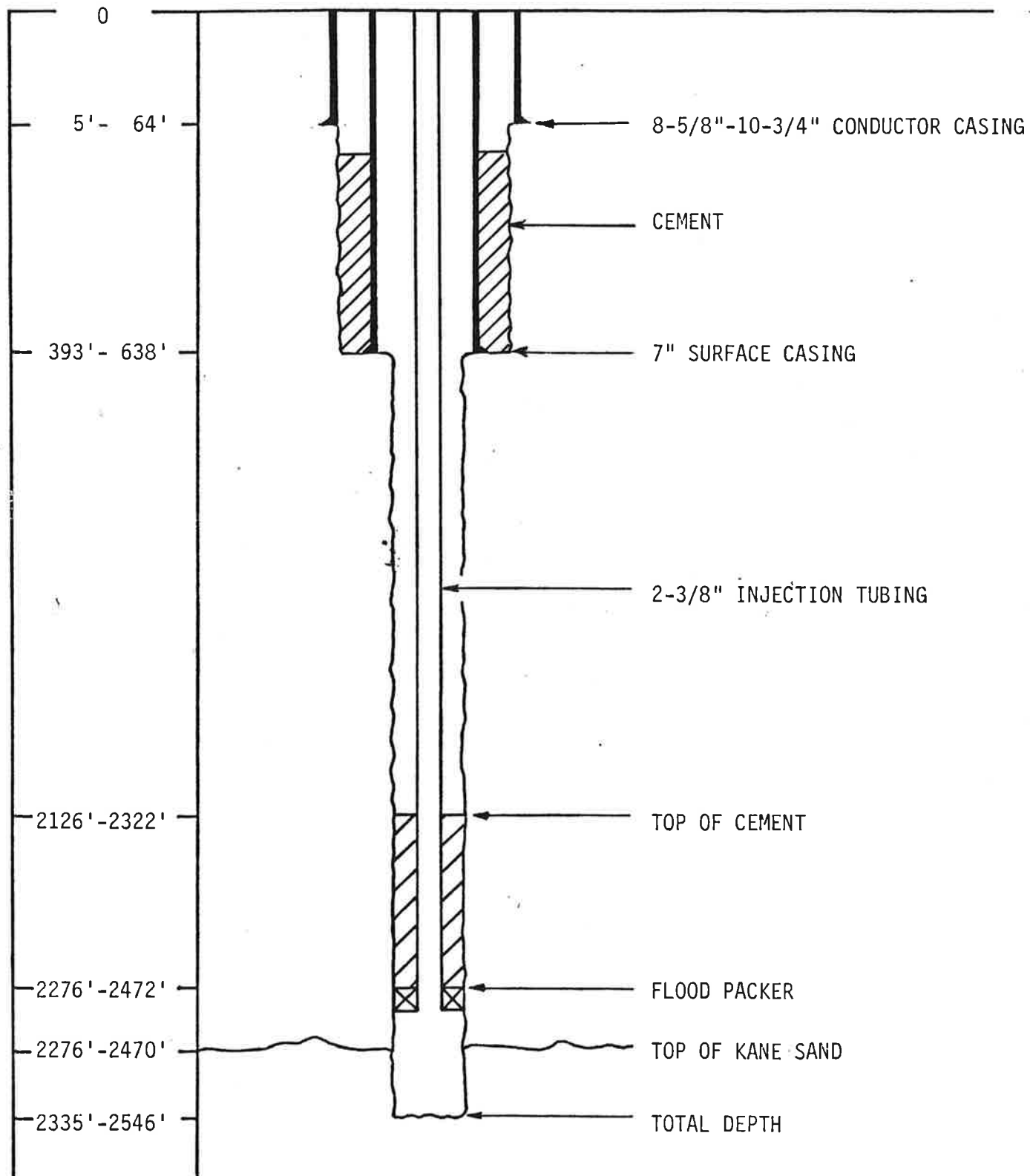
KANE SAND UNIT NO. 1

INTAKE WELL COMPLETION SCHEMATIC

COMPLETION TYPE II

(NOT TO SCALE)

DEPTH RANGE (FEET)



KANE SAND UNIT NO. 1

INJECTION WELL PLUG AND ABANDONMENT PROCEDURE

COMPLETION TYPE II

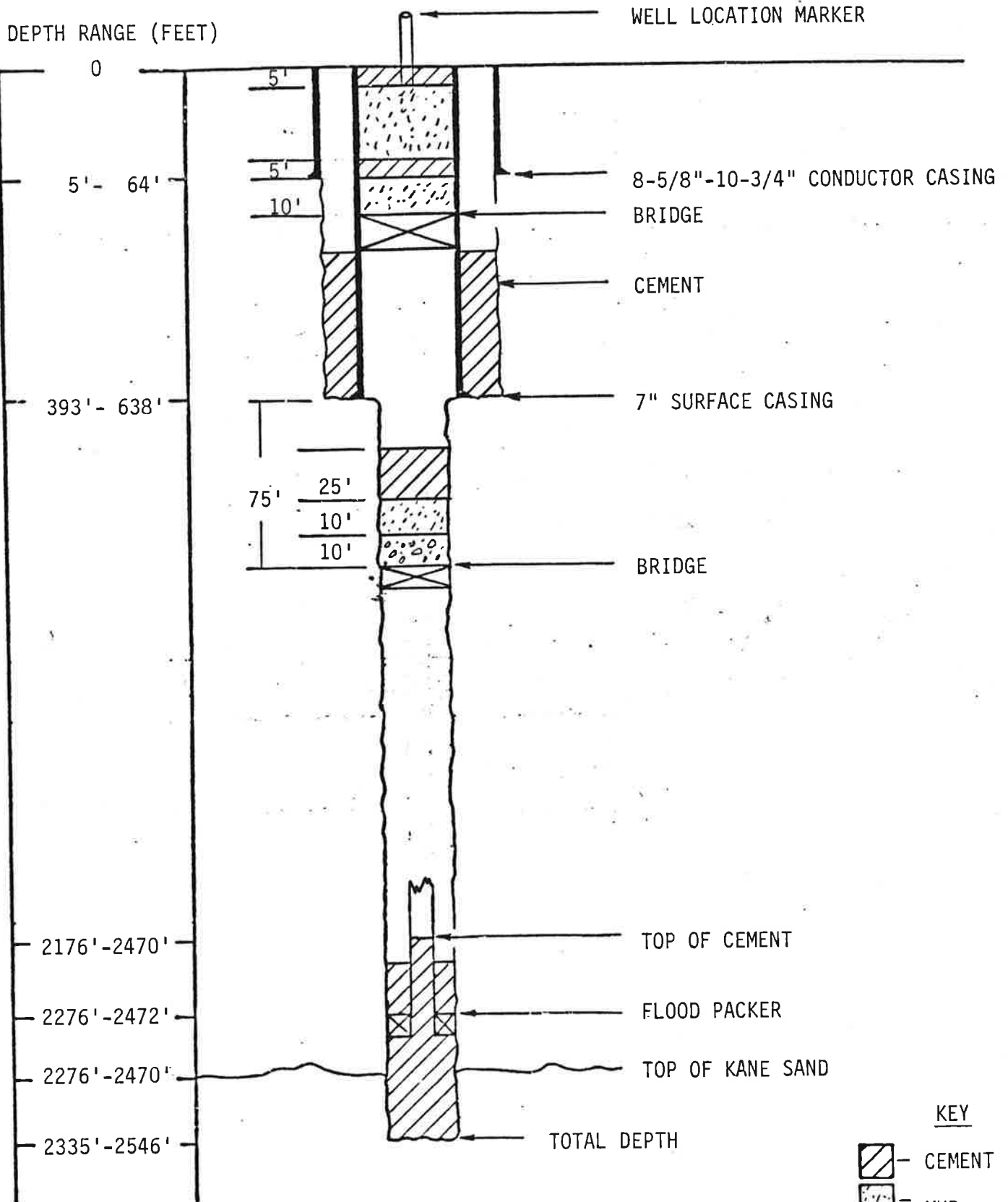
1. Trip in hole (TIH) with open-ended 1.0" O.D. cement string. Tag total depth (TD) below flood packer.
2. Utilizing the balanced method, spot a sufficient volume of API Class A cement to fill open hole volume and 100' of injection tubing above flood packer.
3. Pull out of hole (POH) approximately 300 feet.
4. Wait on cement 16 hours (minimum).
5. TIH and tag top of cement (TOC). If TOC is not 100' or more above flood packer then spot additional cement until a 100' plug exists above the top of the packer.
6. POH.
7. TIH and shoot-off injection tubing above TOC.
8. Pull injection tubing.
9. Set bridge approximately 75' below surface casing seat.
10. Dump 10' of pea gravel followed by 10' of earthen mud on top of bridge.
11. Using balanced method, set a 5 sack cement plug on top of fill.
12. POH.
13. Pull surface casing, if possible.
14. Set bridge approximately 10' below conductor casing seat.
15. Dump 10' of mud on top of bridge.
16. Using dump method, set a 5 foot cement plug on top of mud.
17. Fill well to surface with earthen mud.
18. Cement permanent well location marker at surface.

KANE SAND UNIT NO. 1




PLUG & ABANDON SCHEMATIC - COMPLETION TYPE II

SURFACE CASING LEFT IN PLACE

(NOT TO SCALE)



KEY

-  CEMENT
-  MUD
-  PEA GRAVEL

KANE SAND UNIT NO. 1
PLUG AND ABANDONMENT COST ESTIMATE
COMPLETION TYPE II

<u>Operation</u>	<u>Estimated Cost</u>
Plugging Unit (5 days @ \$320.00/day)	\$1,600.00
Cement (30sks @ \$5.00/sk)	150.00
Miscellaneous (tool rental, etc.)	400.00
Transportation and Hauling	<u>850.00</u>
Total	\$3,000.00

The estimated cost for plug and abandoning the 64 injection wells in the Kane Sand Unit No. 1 project would be approximately \$192,000.00.


 UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 WASHINGTON, DC 20460

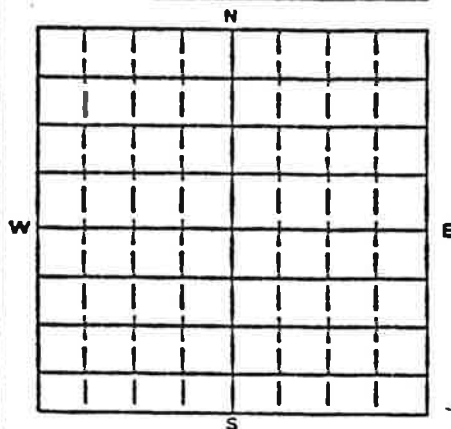
PLUGGING AND ABANDONMENT PLAN

NAME AND ADDRESS OF FACILITY

 Lamont Plant
 Kane Sand Unit No. 1
 Sackett, PA

NAME AND ADDRESS OF OWNER/OPERATOR

 Pennzoil Company
 54 Boylston Street
 Bradford, PA 16701

**LOCATE WELL AND OUTLINE UNIT ON
SECTION PLAT — 640 ACRES**

STATE

PA

COUNTY

Elk

PERMIT NUMBER

 SURFACE LOCATION DESCRIPTION To key well No. 4 78°
 4,270 ft. South of Lat. 41°32'30" 1,200 ft. West of Long. 55°00"

LOCATE WELL IN TWO DIRECTIONS FROM NEAREST LINES OF QUARTER SECTION AND DRILLING UNIT

 Surface
 Location _____ ft. from (N/S) _____ Line of quarter section
 and _____ ft. from (E/W) _____ Line of quarter section

TYPE OF AUTHORIZATION

- ☐ Individual Permit
☐ Area Permit
☒ Rule

 Number of Wells 64

Lease Name

WELL ACTIVITY

- ☐ CLASS I
☒ CLASS II
☐ Brine Disposal
☒ Enhanced Recovery
☐ Hydrocarbon Storage
☐ CLASS III

Well Number

CASING AND TUBING RECORD AFTER PLUGGING

SIZE	WT(LB/FT)	TO BE PUT IN WELL (FT)	TO BE LEFT IN WELL (FT)	HOLE SIZE
10-3/4			5-64	12-1/4
7			393-638	8-5/8

METHOD OF EMPLACEMENT OF CEMENT PLUGS

- ☒ The Balance Method
☒ The Dump Bailer Method
☐ The Two-Plug Method
☐ Other

CEMENTING TO PLUG AND ABANDON DATA:

	PLUG #1	PLUG #2	PLUG #3	PLUG #4	PLUG #5	PLUG #6	PLUG #7
Size of Hole or Pipe in which Plug Will Be Placed (inches)	6-1/4	6-1/4	7	7			
Depth to Bottom of Tubing or Drill Pipe (ft.)	See Table I						
Sacks of Cement To Be Used (each plug)	20	5	1	1			
Slurry Volume To Be Pumped (cu. ft.)	23.6	6	1.2	1.2			
Calculated Top of Plug (ft.)	2323	515	35	0			
Measured Top of Plug (if tagged ft.)	See Attachments						
Slurry Wt. (Lb./Gal.)	15.6	15.6	15.6	15.6			
Type Cement or Other Material (Class III)	common	common	common	common			

LIST ALL OPEN HOLE AND/OR PERFORATED INTERVALS AND INTERVALS WHERE CASING WILL BE VARIED (If any)

From	To	From	To

Estimated Cost to Plug Wells

\$3,000/well 64 = \$192,000

CERTIFICATION

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.32)

NAME AND OFFICIAL TITLE (Please type or print)

 A. L. Richmond
 District Manager

SIGNATURE

DATE SIGNED

6/18/85